Catalogue of American Amphibians and Reptiles.

DUELLMAN, WILLIAM E. 1968. *Smilisca sila.*

Smilisca sila Duellman and Trueb
Pugnosed smilisca

Smilisca sila Duellman and Trueb, 1966:318. Type-locality "small stream at north edge of the village of El Volcán, Chiriquí Province, Panamá, elevation 1280 meters." Holotype, Univ. Kansas Mus. Nat. Hist. 91852, adult male collected by William E. Duellman, 5 February 1965.

• CONTENT. No subspecies are recognized.

• DEFINITION AND DIAGNOSIS. A moderate-sized *Smilisca*—males are not known to exceed 45 mm in snout-vent length; females reach maximum snout-vent lengths of 62 mm. The head is short, and the snout is truncate. The lips are thick, rounded, and not flaring. The diameter of the tympanum is about one-half that of the eye. The tarsal fold is weak, but extends the full length of the tarsus. The inner metatarsal tubercle is low, flat, and elliptical. The fingers are one-third webbed, and the toes are three-fourths webbed. The skull is wider than long and has a large ovoid frontoparietal fontanelle and no supraorbital flanges. The squamosal is small and not in contact with the maxillary. The bony section of the ethmoid extends anteriorly between the nasals. In life the venter is creamy white, and the dorsum is gray, tan, or pale reddish brown with dark brown, olive-brown, or dark reddish brown spots or blotches. The dorsal surfaces of the limbs are marked with dark brown or black mottling. The posterior surfaces of the thighs are brown or black with blue flecks. The upper lips are dark brown with an interrupted white margin. The iris is brown. In breeding males the anterior part of the throat is dark gray or dark brown.

Tadpoles have long tails (about twice the length of the body) with dark brown markings. The large ventral mouth has the median part of the upper lip bare; the rest of the mouth is bordered by one row of papillae. The inner margin of the upper beak forms a continuous arch with the lateral processes.

The combination of the short, blunt snout with blue spots and flecks on the flanks and posterior surfaces of the thighs immediately distinguish *Smilisca sila* from other members of the genus. Blue spots are present on the flanks of *S. cyanosticta* and some *S. sordida*. The former is a larger (males 56 mm; females 70 mm) species having a longer, more sloping snout, and a dark brown postorbital mark. The snout is low and sloping in *S. sordida*; the lips are thin and flaring, and the throat in breeding males is white. The presence of a long tail having low fins and of a single row of papillae fringing the mouth distinguishes the tadpoles of *S. sila* from those of other members of the genus. The only other *Smilisca* having a long tail is *S. sordida*, which has two rows of papillae fringing the mouth. Adults of *S. sila* are not readily confused with any other hylids occurring in the same geographic region. Of the other hylids that occur sympatrically with *S. sila*, only *Hyla legleri* has tadpoles resembling those of *S. sordida*. The tadpole of *Hyla legleri* somewhat resembles that of *S. sila* but has a proportionately longer tail and a much larger mouth with 3/5 tooth rows.

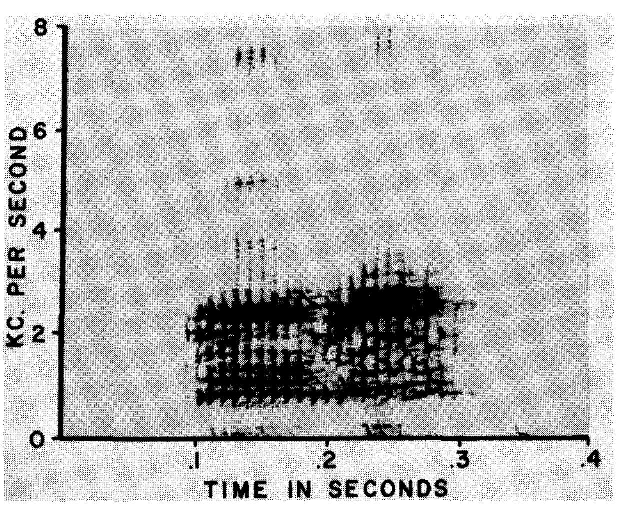


FIGURE. Audiospectrogram (narrow band, 40 cycles per second) of the mating call of *Smilisca sila*: Chiriquí Province, Panamá, 5 February 1965, air 17.8°C. (University of Kansas Mus. Nat. Hist. Tape no. 385; specimen no. 91852.)

• DESCRIPTIONS. Detailed descriptions of adults, juveniles, eggs, tadpoles, the skull and breeding call given by Duellman and Trueb (1966) augment the data given in the foregoing definition. The breeding call consists of a low "squawk" usually followed by one or more rattling secondary notes. The duration of the primary note varies from 0.06 to 0.28 seconds; that of the secondary notes, 0.14 to 0.48 seconds. Calls usually are repeated at intervals of 4 to 20 seconds. The primary notes have 97 to 120 pulses per second, and the two most emphasized frequencies are at about 900 and 2220 cycles per second.

• ILLUSTRATIONS. For photographs of adults see Breder (1946, pl. 55—cited as *Hyla phaeota*) and Duellman and Trueb (1966). The latter also illustrate the hands, feet, lateral views of head and tadpole, and mouthparts of tadpole, and provide an audiospectrogram.

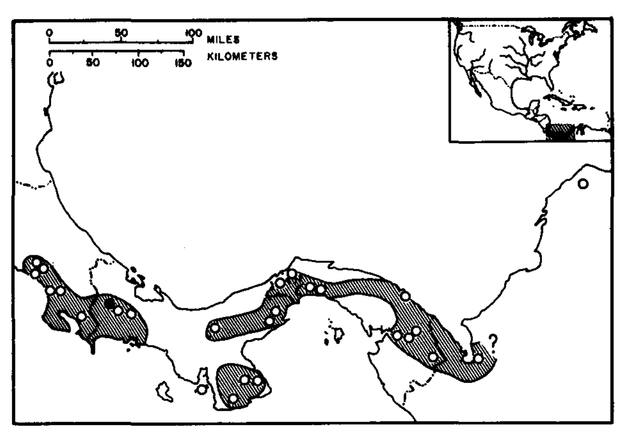
• DISTRIBUTION. *Smilisca sila* is known from the Pacific lowlands of southeastern Costa Rica and from the southern slopes of the highlands and from the Pacific lowlands of Panamá. Only in the Canal Zone does the species occur in the Atlantic drainage in Central America. In Colombia the species is known from two localities in the Caribbean lowlands. The altitudinal range extends from near sea level to about 1300 meters in the Cordillera Talamanca in Chiriquí, Panamá and to about 800 meters in the mountains in eastern Panamá. The distribution of the species seems to depend on the presence of shallow rocky streams for breeding purposes.

• FOSSIL RECORD. None.

• PERTINENT LITERATURE. Present knowledge of this species is elaborated in detail by Duellman and Trueb (1966). These authors list all specimens and locality records known at that time. Material collected subsequently does not extend the range as given by them.

• REMARKS. Prior to Duellman and Trueb's (1966) monograph of the genus *Smilisca*, the species now known as *S. sila* had been confused with the species now known as *S. sordida*. Dunn (1937), Cooper (1944), and Breder (1946) listed the species as *Hyla sordida*, and Noble (1924), Dunn (1931), and K. P. Schmidt (1933) used the name *Hyla gabbii* (a synonym of *S. sordida*).

Duellman and Trueb (1966) suggested that the frog named *Hyla molitor* by O. Schmidt (1857) might be conspecific with their *Smilisca sila*. Examination of a syntype of *Hyla molitor* (Zool. Mus. Vienna) revealed that *H. molitor* is a species distinct from *S. sila*.



MAP. The solid symbol marks the type-locality, open symbols indicate other records.

The vernacular name, pugnosed smilisca, is proposed in allusion to the distinctive short, truncate snout of the species.

• Etymology. The name *sila* refers to the blunt snout and is derived from the Latin *silus* meaning pugnosed.

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